

Natural Sciences NTSC 10200 -- Spring 2005

Rocky Kolb

Syllabus

Part I – The Solar System

Readings: Kolb, Chapters 1-5

Labs: April 4 – April 8 Moons of Jupiter (week one)
April 11 – April 15 Moons of Jupiter (week two)
April 18 – April 22 Temperature of the Universe (week one)
April 25 – April 29 Temperature of the Universe (week two)

Lectures: March 29: Introduction to Nat Sci 102, introduction to cosmology, introduction to the universe, introduction to Hyde Park, and a look at the sky.

March 31: Greek astronomy through Ptolemy. Retrograde motion, epicycles, the Greek universe.

April 5: Copernicus: The heliocentric universe.

April 7: Brahe: Measuring the sky.

April 12: Kepler: The laws of planetary motion.

April 14: Galileo: The tribulations and trial.

April 19: Newton: The clockwork universe.

April 21 Exam.

Part II – Galaxies and the Universe

Readings: Kolb, Chapters 6-11

Labs:	May 2 – May 6	Geometry of the Universe (week one)
	May 9 – May 13	Geometry of the Universe (week two)
	May 16 – May 20	TBA
	May 23 – May 27	TBA

Lectures:	April 26:	Nebulae.
	April 28:	The distance scale.
	May 3:	Galaxies and large-scale structure.
	May 5:	The expanding universe.
	May 10:	The hot universe.
	May 12:	The big bang I.
	May 17:	The big bang II.
	May 19:	Inflation.
	May 24:	Exam.

Part III – The Megaverse

Readings: Hawking

Lectures:	May 26:	The Quantum and the Cosmos.
	May 31:	Imaginary time/Before the big bang.
	??????	FINAL EXAM (???????)